

**DESCRIPTION**

Work shall consist of connecting a newly constructed water main to an existing water main as shown on the plans and as directed by the Resident Engineer.

**MATERIALS****GENERAL**

Materials shall conform to the requirements of MCDOT Item Specification 660.06XXXX.

**FITTINGS**

All fittings and joint connection materials required to make the connection shall be approved by the Resident Engineer prior to installation.

**THRUST RESTRAINT**

Concrete thrust blocks and mechanical joint retainer glands shall be used on fittings. Concrete thrust blocks, mechanical joint retainer glands and other joint restrainers shall conform to the requirements of MCDOT Item Specification 660.06XXXX.

**BEDDING, BACKFILL AND SURFACE RESTORATION**

Bedding materials and method of placement shall conform to the requirements of MCDOT Item Specification 660.06XXXX. Backfill and surface restoration materials and method of placement shall conform to the project requirements.

**CONSTRUCTION DETAILS****GENERAL**

All work shall be coordinated with Monroe County Water Authority (MCWA).

MCWA will operate all valves needed to isolate the section of existing water main to be shut down. Maximum length of shut down is 4 hours.

MCWA shall be notified, in writing, a minimum of three (3) working days in advance of intent to do the work requiring operation of valves and appurtenances. MCWA shall be notified again twenty-four (24) hours in advance of proposed shut down. All valves and appurtenances are to be operated only by authorized representatives of MCWA. Contractor shall notify all affected customers prior to the shut down, per MCDOT Item Specification 660.06XXXX.

Take appropriate measures to prevent dirt, debris, and surface water from entering water mains. Plug open pipe ends with watertight plugs whenever work is discontinued for any length of time, or when laying condition may allow foreign matter to enter the pipe.

Before installation, swab interior of open pipe ends, all new pipe, fittings and sleeves used in making the connection, with a 5 percent sodium hypochlorite solution.

**INSTALLATION**

Pavement saw cutting shall be required prior to all work, except in areas of reconstruction. All street cuts shall be made by a pavement saw and shall conform to the requirements of MCDOT Item Specification 502.5014.

Excavation shall only be to a sufficient length, width and depth needed to expose, cut and remove a section of existing water main, and to connect the new water main. Excavation shall conform to the requirements of NYSDOT Standard Specifications, Section 206, latest revision.

Pipe cutting equipment and methods shall be as approved by the Resident Engineer, prior to cutting the pipe. All cuts shall be straight, smooth and perpendicular to the centerline of pipe.

Prior to installation of any new pipe, the end of the existing water main shall be cleaned. All loose dirt, scale and rust shall be removed to a length sufficient to properly install the connection fitting.

Connect new water main to existing main using approved and appropriate gaskets, materials and fittings.

The fit between the existing water main and new pipe shall be tight and shall not exceed a gap of 10 millimeters. All tees, elbows, bends and plugs shall be solidly braced against the trench wall to prevent any deflection due to thrust pressure. Bracing shall be accomplished by the use of cast-in-place concrete blocks, ready-mix concrete and restrained joints, subject to the requirements of MCDOT Item Specification 660.06XXXX. All pipe joints shall be made watertight. Prior to backfilling, fill the water main and, in the presence of Resident Engineer, pressure test the connection under line pressure.

Open end of the abandoned water main pipe shall be plugged with concrete. Concrete plugs shall completely fill the water main pipe for a length of 305 mm with thrust restraint between the pipe end and the connection.

Close valves in the abandoned water main and remove the valve boxes per appropriate Item Specification.

**METHOD OF MEASUREMENT**

Quantity to be measured under this item shall be the number of connections actually made.

**BASIS OF PAYMENT**

**ITEM 660.45 M****CONNECT NEW WATER MAIN TO EXISTING WATER MAIN**

Unit price bid shall include the cost of: cutting and removing a piece of existing water main; removing existing plug; cleaning existing pipe; furnishing and using all temporary plugs and disinfectant to prevent contamination of water main; connecting new water main to existing water main; furnishing and placing all pipe, pipe specials, gaskets, fittings, offsets, bends, tees, crosses, joints, and thrust blocks; restrained joints; plugging abandoned water main with concrete; pavement saw cutting; pressure testing; and furnishing all labor, material and equipment necessary to complete the work.

Excavation, rock excavation, furnishing and placing of bedding and select granular backfill, and surface restoration will be paid for under separate bid items.

Payment for installation of a tee or cross into existing water main shall be considered as one connection.

Payment will be made under:

<b><u>Item No.</u></b>	<b><u>Item</u></b>	<b><u>Pay Unit</u></b>
660.45 M	Connect New Water Main to Existing	EA